ABSTRACT OF THE DISCLOSURE

Efficient LDPC code decoding with new minus operator in a finite precision radix system. A new mathematical operator is introduced and applied to the decoding of LDPC coded signals. This new operator is referred to as the min†- (min-dagger minus) operator herein. This min†- processing is appropriately applied during the updating of the edge messages with respect to the variable nodes. In a bit level decoding approach to decoding LDPC coded signals, the updating of the edge messages with respect to the bit nodes is performed using the new min†- operator. This approach provides very comparable performance to min** processing as also applied to updating of the edge messages with respect to the bit nodes and may also provide for a significant savings in hardware. Also, within finite precision radix systems, the new min†- operator provides a means by which always meaningful results may be achieved during the decoding processing.